Current Status of Claims

1. (*cancelled*) A method for manufacturing panel bodies of plastic material, where the plastic material is injected into a mould cavity of a mould for the filling thereof, wherein after the injection of the plastic material the mould cavity is caused to expand from a first volume (V1) to a second, larger volume (V2), whilst the plastic material expands, the plastic material having added thereto a drive means, and the moulded flat body is subsequently removed from the cavity of the mould, characterised in

- that prior to the injection of the plastic material, strings, bars, tubes or netting of reinforcing material are placed in recessed portions of the first volume of the mould cavity;
- that the reinforcing material is held up point-by-point by pushers that project up through the respective bottoms of said recessed portions until the recessed portions have been filled with plastic material to surround the reinforcing material; and
- that the pushers are withdrawn from the recessed portions and thus from support of the reinforcing material as the mould cavity expands to its second volume.

2. (*currently amended*) A method as disclosed in claim [[~~1~~]] **17**, characterised in

- that the mould cavity **has a bottom part and** in [[~~its~~]] **the** second volume **of the mould cavity the** [[~~has its~~]] bottom part **is** level with the bottom of said recessed portions.

3. (*currently amended*) A method as disclosed in claim [[~~1~~]] **17** characterised in

- that the plastic material is a polyolefin material, e.g., polyethylene or polypropylene.

4. (*currently amended*) A method as disclosed in claim [[~~1~~]] **17**, characterised in

- that the plastic material has a talcum added thereto.

5. (*currently amended*) A method as disclosed in claim [[~~1~~]] **17** characterised in

- that the first volume **of the mould cavity** [[~~(V1)~~]] is in the range of 10 – 60% of the second volume **of the mould cavity** [[~~(V2)~~]], preferably 15 – 45% of the second volume, or more preferably about 27 – 30% **of the second volume**.

6. (*currently amended*) A method as disclosed in claim [[1]] **17**, characterised in

- that the **plastic material has** [[~~drive means is~~]] a foaming agent or a blowing agent **for expansion of the plastic material**.

7. (*cancelled*) An apparatus for manufacturing panel bodies of plastic material, wherein the plastic material is injectable into a mould cavity of a mould for the filling thereof, where the mould cavity is equipped with a movable mould bottom (39, 40, 43, 55 and 58), which in a first position defines a first volume (V1) of the cavity and in a second position defines a second, larger volume (V2) of the cavity, characterised in

- that the apparatus has a means (25, 30, 56) for locking the mould bottom in the first position until the first volume has been filled by plastic material to which a drive means has been added;
- that the mould bottom in a known way is designed to move to its second position as the plastic material expands, the panel body thus acquiring said second volume;
- that in the mould cavity (59), in connection with the first volume, there are provided recessed portions designed for the placement of reinforcing material (60) of strings, bars, tubes or netting prior to the injection of the plastic material;
- that pushers (21) are designed to movably project up though the bottom of the respective recessed portions in order at some points to hold the reinforcing material above the said bottom until the recessed portions have been filled with plastic material by its injection into the mould cavity (59) to surround the reinforcing material; and
- that the pushers (21) are designed to be withdrawn from the recessed portions and from supporting engagement with the reinforcing material as the mould cavity expands to its second volume.

8. (*currently amended*) An apparatus as disclosed in claim [[~~7~~]] **18**, characterised in that the mould has a mould bottom [[~~is composed of~~]] **that includes** a plurality of movable mould components [[~~(39, 40, 43, 55 and 58)~~]].

9. (*currently amended*) An apparatus as disclosed in claim [[~~7~~]] **18**, characterised in that the mould has a mould bottom [[~~consists of~~]] **that includes** individually movable mould components [[~~(39, 40, 43, 55 and 58)~~]].

10. (*currently amended*) An apparatus as disclosed in claim [[~~7~~]] **18**, characterised in

- that said **mould has a** mould bottom [[~~is~~]] supported by at least one bottom anchor bar [[~~which on its~~]] **having an** underside [[~~has~~]] **with** a plurality of cut-outs or pressure pad receivers; and
- that said locking means [[~~consists of~~]] **includes** an elongate body with upwardly facing pressure pad elements, where each **said** pressure pad element is [[~~designed to be~~]] complementary to the shape of the cut-out, and where said **pressure pad** elements in a locking position of the mould bottom each support an underside portion of the bottom anchor bar, and in a non-locking position permit, on expansion of the plastic material, a downward movement of the mould bottom components, **to enable** the cut-out [[~~thus being~~]] **to be** moved into engagement with a respective pressure pad element.

11. (*currently amended*) An apparatus as disclosed in claim [[~~7~~]] **18**, characterised in

- that the mould cavity in its second volume [[~~is designed to have its~~]] **has the mould** bottom part level with the bottom of the respective said recessed portions.

12. (*currently amended*) An apparatus as disclosed in claim [[~~7~~]] **18**, characterised in

- that the plastic material is a polyolefin material, e.g., polyethylene or polypropylene.

13. (*currently amended*) An apparatus as disclosed in claim [[~~7~~]] **18**, characterised in

- that the plastic material has talcum added thereto.

14. (*currently amended*) An apparatus as disclosed in claim [[~~7~~]] **18**, characterised in

- that the first volume **of the mould cavity** is in the range of 10 – 60% of the second volume **of the mould cavity**, preferably 15 - 45% of the second volume, **or more** preferably about 27 - 30% **of the second volume**.

15. (*currently amended*) Use of a method as disclosed in claim [[1]] **17**, for manufacturing reinforced panel bodies for use as floor, wall or ceiling panels, or as shuttering or trim panels.

16. (*currently amended*) Use of an apparatus as disclosed in claim [[~~7~~]] **17**, for manufacturing reinforced panel bodies for use as floor, wall or ceiling panels, or as shuttering or trim panels.

17. (*new*) A method for manufacturing panel bodies of plastic material in a mould having a mould cavity comprising,

a) providing the mould with a mould cavity that is expandable from a first volume to a second larger volume,

b) providing the mould cavity with a plurality of recessed portions having respective bottoms,

c) prior to injecting plastic material into the mould cavity,

(i) placing one or more reinforcing materials selected from the group consisting of strings, bars, tubes and netting, in the recessed portions of the mould cavity,

(ii) moving and supporting the reinforcing material from the recessed portions with respective pushers that project up through the respective bottoms of the recessed portions into the mould cavity when the mould cavity is at its first volume,

d) injecting expandable plastic material with a drive means into the mould cavity to fill the first volume of the mould cavity and surround the supported reinforcing material in the mould cavity,

e) after injection of the plastic material to fill the first volume of the mould cavity, expanding the mould cavity from the first volume to the second larger volume to accommodate expansion of the plastic material into the enlarged space of the second volume and,

f) withdrawing the pushers from the reinforcing material and the recessed portions of the mould cavity as the mould cavity expands from the first volume to the second volume to remove the pusher support from the reinforcing material and the expanding plastic material before the plastic material fully expands to the second volume of the mould cavity.

18. (*new*) An apparatus for manufacturing panel bodies of plastic material comprising,

a) a mold having a mold cavity for injection of expandable plastic material therein to fill the mold cavity,

b) the mold cavity having a movable bottom portion locatable in a first position that defines a first volume of the mould cavity, the bottom portion being movable from the first position to a second position to define a second volume of the mold cavity that is larger than the first volume of the mold cavity,

c) means for releasably locking the movable bottom portion of the mold cavity in the first position until the first volume of the mould cavity can be filled with the plastic material,

d) means for moving the movable bottom portion of the mould cavity from the first position to the second position after the first volume of the mould cavity is filled with plastic material, to enable the plastic material to expand into the enlarged space of the second volume of the mould cavity,

e) the mould cavity including a plurality of recessed portions for containing reinforcing material prior to injection of the plastic material into the mould cavity, said recessed portions having respective bottoms,

f) at least one movable pusher rod for each recessed portion projectable through the respective bottoms of the recessed portions to move and hold reinforcing material in the mould cavity in a support position away from the recessed portions during injection of the plastic material into the mould cavity, to enable the injected plastic material to surround the reinforcing material in the mould cavity and,

g) means for withdrawing the pusher rods through the bottom of the recessed portions, away from the support position and away from the reinforcing material as the mould cavity expands from the first volume to the second volume, to prevent the pusher rods from contacting the expanding plastic material and from contacting the reinforcing material when the plastic material is expanded to the second volume of the mould cavity.